



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/625,626	07/26/2000	William C.Y. Lee	139.136USU1	8528
22462	7590	05/22/2007	EXAMINER	
GATES & COOPER LLP HOWARD HUGHES CENTER 6701 CENTER DRIVE WEST, SUITE 1050 LOS ANGELES, CA 90045			RAMPURIA, SHARAD K	
		ART UNIT	PAPER NUMBER	
		2617		
		MAIL DATE	DELIVERY MODE	
		05/22/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/625,626	LEE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Sharad Rampuria	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 06 March 2007.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-10, 12-25 and 27-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-10, 12-25 and 27-30 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_
- 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

## **DETAILED ACTION**

I. The Art Unit location of this application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.

### ***Disposition of the claims***

II. The current office-action is in response to the Amendment - After Non-Final Rejection filed on 03/06/2007.

Accordingly, Claims 11 and 26 are cancelled and Claims 1-10, 12-25, 27-30 are imminent for further assessment as follows:

### ***Claim Rejections - 35 USC § 103***

III. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-10, 12-16, 18-25 and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tayloe et al. (USP 5095500) in view of Borras et al. (USP 5303240).

Regarding Claim 1, Tayloe disclosed a method for operating a wireless network (abstract), comprising:

(a) Collecting and analyzing information from the wireless network into a collection and analysis system coupled to the wireless network (OMCU; 116; Fig.1; Col.5; 25-39), wherein the information includes location information on a plurality of mobile transceivers communicating with the wireless network; (Col.5; 25-39) and

Taylor fails to disclosed optimizing the wireless network's operation from a network control system coupled to the wireless network by intelligently steering radio frequency (RF) signal beams transmitted from the wireless network in the direction of one or more of the plurality of mobile transceivers using the collected and analyzed information. However, Borras teaches in an analogous art, that (b) optimizing the wireless network's operation from a network control system coupled to the wireless network by intelligently steering radio frequency (RF) signal beams transmitted from the wireless network in the direction of one or more of the plurality of mobile transceivers using the collected and analyzed information. (e.g. sweeping the directional antenna to maximize the gain; Col.2; 13-24, Col.4; 49-Col.5; 3) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Taylor including optimizing the wireless network's operation from a network control system coupled to the wireless network by intelligently steering radio frequency (RF) signal beams transmitted from the wireless network in the direction of one or more of the plurality of mobile transceivers using the collected and analyzed information in order to offer an enterprise of a directional antenna to increase system gain in a limited direction by reducing the system gain in other directions. The use of a plurality of antennas and/or a means of steering a given number of antennas in addition to measuring signal quality (in a given direction) would allow the selection

of a particular direction to achieve improved system gain. Antenna arrays are typically used to steer an antenna beam electronically.

Regarding Claim 3, Tayloe disclosed The method of claim 1, wherein the information further includes one or more types of information selected from a group comprising Hand Off (HO) information, Power information, Measurements, and System Parameters from the wireless network. (col.4: 51-col.5; 5)

Regarding Claim 4, Tayloe disclosed all the particulars of the claim except wherein the information is collected when certain defined thresholds are triggered. However, Borras teaches in an analogous art, that The method of claim 1, wherein the information is collected when certain defined thresholds are triggered. (e.g. handoff; Col.5: 7-29)

Regarding Claim 5, Tayloe disclosed The method of claim 1, wherein the optimizing step further comprises dynamically allocating radio frequency (RF) signal power in the wireless network based on the collected and analyzed information (Col.5; 1-5).

Regarding Claim 6, Tayloe disclosed The method of claim 5, wherein the dynamically allocating step further comprises dynamically assigning radio frequency (RF) signal power to cells, sectors within cells, and mobile transceivers based on the collected and analyzed information (Col.5; 1-5 & col.6; 9-15).

Regarding Claim 7, Tayloe disclosed all the particulars of the claim except setting dynamic dedicated handoff (HO) thresholds for individual mobile transceivers based on the collected and analyzed information. However, Borras teaches in an analogous art, that The method of claim 1, wherein the optimizing step further comprises setting dynamic dedicated handoff (HO) thresholds for individual mobile transceivers based on the collected and analyzed information. (Col.5: 7-29)

Regarding Claim 8, Tayloe disclosed all the particulars of the claim except the individual mobile transceivers each have a unique, assigned HO (hand off) threshold. However, Borras teaches in an analogous art, that The method of claim 7, wherein the individual mobile transceivers each have a unique, assigned HO (hand off) threshold. (Col.5: 7-29)

Regarding Claim 9, Tayloe disclosed all the particulars of the claim except performing handoffs for individual mobile transceivers based on their unique, assigned HO (hand off) threshold and their location. However, Borras teaches in an analogous art, that The method of claim 8, wherein the optimizing step further comprises performing handoffs for individual mobile transceivers based on their unique, assigned HO (hand off) threshold and their location. (Col.5: 7-29)

Regarding Claim 10, Tayloe disclosed all the particulars of the claim except the performing step comprises performing handoffs for individual mobile transceivers in order to minimize interference levels. However, Borras teaches in an analogous art, that The method of

claim 9, wherein the performing step comprises performing handoffs for individual mobile transceivers in order to minimize interference levels. (Col.5: 7-29)

Regarding Claim 12, Tayloe teaches all the particulars of the claim except wherein the intelligently steering step further comprises intelligently forming an RF signal beam based on the collected and analyzed information. However, Borras teaches in an analogous art, that the method of claim 1, wherein the intelligently steering step further comprises intelligently forming an RF signal beam based on the collected and analyzed information. (e.g. sweeping the directional antenna to maximize the gain; Col.2; 13-24, Col.4; 49-Col.5; 3)

Regarding Claim 13, Tayloe disclosed The method of claim 1, further comprising identifying and resolving problems using the collected and analyzed information. (Col.5: 40-52)

Regarding Claim 14, Tayloe disclosed The method of claim 13, wherein the identifying and resolving step further comprises identifying problems in the wireless network, and correlating the identified problems with the collected and analyzed information. (Col.5: 40-52)

Regarding Claim 15, Tayloe disclosed The method of claim 14, wherein the correlating step further comprises correlating the identified problems with mobile transceiver location information from the collected and analyzed information. (Col.5: 40-52)

**Claims** 16, 18-25, and 27-30 are the system claim corresponding to method claims 1, 3-10, 12-15 respectively, and rejected under the same rational set forth in connection with the rejection of claims 1, 3-10, 12-15 respectively, above.

Claims 2, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tayloe and Borras further in view of Grimes. (USP 5479482).

Regarding Claim 2, the above combinations disclosed all the particulars of the claim except E911 location information. However, Grimes teaches in an analogous art, that the method of claim 1, wherein the location information comprises E911 location information. (Col.3; 39-49) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include E911 location information in order to provide public emergency call location information.

**Claim** 17, is the system claim corresponding to method claim 2, respectively, and rejected under the same rational set forth in connection with the rejection of claim 2 respectively, above.

#### ***Response to Remarks***

IV. Applicant's arguments filed on 03/06/2007 have been fully considered but they are not persuasive.

#### ***Relating to Claim 1:***

Since **BORRAS** teaches, " the transceiver, (preferably the portable communication unit) would scan by "sweeping" the antenna (404) preferably using a scanning means and then measure the signal quality in each antenna direction (406) preferably using a signal quality measuring means. The best antenna direction is selected (408) preferably using a steering means which steers the antenna in the direction providing the best signal quality. Once the best direction is assigned, then normal communications can proceed (410)." (Borras, Col.2; 13-24, Col.4; 49-Col.5; 3), which *corresponds* to the claimed limitation as "optimizing the wireless network's operation from a network control system coupled to the wireless network by intelligently steering radio frequency (RF) signal beams transmitted from the wireless network in the direction of one or more of the plurality of mobile transceivers using the collected and analyzed information." Thus, sweeping the directional antenna to maximize the gain the best signal quality, (Borras, Col.4; 49-Col.5; 3), is exactly as applicant is rely upon, Yet another area of optimization provided by the present invention is intelligent beam steering and beam forming using the information provided to the Data Collection and Filtering system 114. The Network Control system 116 can intelligently "steer" and/or "form" RF signal beams generated by the BTS's 106 more intelligently, since the location, speed, and direction of the mobile transceivers 112 is available from the E911 information. For example, a "smart" antenna (such as a phased array antenna) can assign power in the direction of one or more mobile transceivers 112 as required. (Lee et al., Specification, filed on 07/26/2000), that certainly, edify by **BORRAS**. Hence, it is believed that **BORRAS still teaches the claimed limitations.**

The above arguments also recites for the claim 16, consequently the response is the same explanation as set forth above with regard to claim 1.

Because the remaining claims depend directly/indirectly, from one of the independent claims discussed above, consequently the response is the same explanation as set forth above.

With the intention of that explanation, it is believed and as enlighten above, the refutation are sustained.

***Conclusion***

V. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharad Rampuria whose telephone number is (571) 272-7870. The examiner can normally be reached on M-F. (8:30-5 EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on (571) 272-7495. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://portal.uspto.gov/external/portal/pair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or [EBC@uspto.gov](mailto:EBC@uspto.gov).

*Sharad Rampuria*  
Sharad Rampuria  
Patent Examiner  
Art Unit 2617

  
GEORGE ENG  
SUPERVISORY PATENT EXAMINER